

PCT  
PATENT COOPERATION TREATY

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## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE  
 in its capacity as elected Office

<b>Date of mailing (day/month/year)</b> 28 November 2000 (28.11.00)	
<b>International application No.</b> PCT/GR00/00018	<b>Applicant's or agent's file reference</b>
<b>International filing date (day/month/year)</b> 21 April 2000 (21.04.00)	<b>Priority date (day/month/year)</b> 22 April 1999 (22.04.99)
<b>Applicant</b> FOTOPOULOS, G., Anastasios	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
 06 October 2000 (06.10.00)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Manu Berrod Telephone No.: (41-22) 338.83.38
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## P. ENT COOPERATION TREAT

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## NOTIFICATION OF ELECTION

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## Patent Abstracts of Japan

PUBLICATION NUMBER : 09276113  
PUBLICATION DATE : 28-10-97

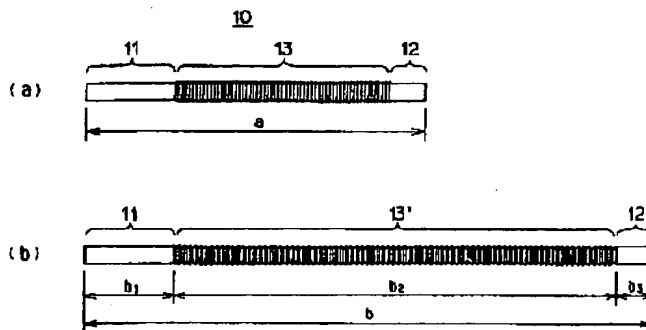
APPLICATION DATE : 16-04-96  
APPLICATION NUMBER : 08093905

APPLICANT : NISHIGAMI:KK;

INVENTOR : UENO TOKUO;

INT.CL. : A47G 21/18 A47G 19/22 B65D 25/20  
B65D 77/28

TITLE : STRAW AND CONTAINER WITH  
STRAW



ABSTRACT : PROBLEM TO BE SOLVED: To provide an easily handleable straw for not feeling inconvenience at the time of sucking drinking water and not requiring keeping space so much.

SOLUTION: This straw 10 is composed of a mouthpiece part 11, a tip part 12 and an accordion part 13 provided between the mouthpiece part 11 and the tip part 12. The accordion part 13 is set so as to turn a length at the time of being extended 13' to be at least double of the length at the time of being contracted 13 and the entire length (b) of the straw 10 at the time of extending the accordion part 13 is set to be at least 1.3 fold of the entire length (a) of the straw 10 at the time of contracting the accordion part 13.

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## Patent Abstracts of Japan

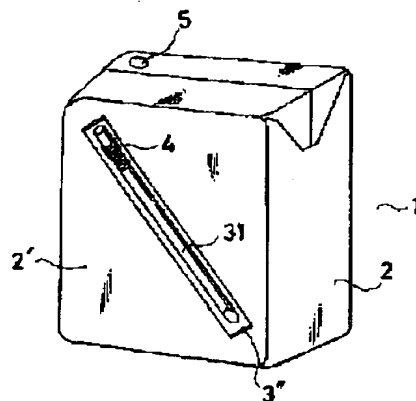
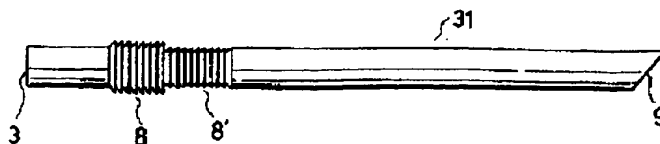
PUBLICATION NUMBER : 08056802  
 PUBLICATION DATE : 05-03-96  
 APPLICATION DATE : 22-08-94  
 APPLICATION NUMBER : 06218308

APPLICANT : TOYO CAP KK;

INVENTOR : KOBAYASHI TOYOKO;

INT.CL. : A47G 21/18

TITLE : STRAW STRUCTURE



**ABSTRACT :** PURPOSE: To enable the stretching of a straight straw freely in suction by attaching the straw onto a diagonal area on the side of a brick-shaped container through a film sheet.

CONSTITUTION: Specified steps of bellows 8 and 8 are arranged at the tip part of a straight straw 31. The bellows 8 and 8 are shortened when the straw is attached onto a diagonal area in a specified length on the side 2' of the container 2 and stretched when a beverage is sipped. Thus, smooth sipping is enabled by stretching the bellows sufficiently while the straw is attached integral by onto the diagonal area on the side of the brick-shaped container through a film sheet.

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**DEMANDS FOR INTERNATIONAL PRELIMINARY EXAMINATION (Continued)****DEMANDES D'EXAMEN PRÉLIMINAIRE INTERNATIONAL (Suite)**

International Application Numbers Numéros des demandes internationales	International Publication Numbers Numéros de publication internationale	International Application Numbers Numéros des demandes internationales	International Publication Numbers Numéros de publication internationale	International Application Numbers Numéros des demandes internationales	International Publication Numbers Numéros de publication internationale
PCT/GB00/01198	WO 00/58283	PCT/GB00/01437	WO 00/65320	PCT/IB99/01475	WO 00/06524
PCT/GB00/01199	WO 00/59069	PCT/GB00/01438	WO 00/65574	PCT/IB00/00187	WO 00/50979
PCT/GB00/01201	WO 00/58917	PCT/GB00/01453	WO 00/64609	PCT/IB00/00188	WO 00/58865
PCT/GB00/01202	WO 00/60275	PCT/GB00/01455	WO 00/63371	PCT/IB00/00253	WO 00/54465
PCT/GB00/01214	WO 00/59168	PCT/GB00/01460	WO 00/64775	PCT/IB00/00262	WO 00/56612
PCT/GB00/01218	WO 00/57749	PCT/GB00/01461	WO 00/64994	PCT/IB00/00298	WO 00/54954
PCT/GB00/01219	WO 00/65832	PCT/GB00/01470	WO 00/64348	PCT/IB00/00299	WO 00/54955
PCT/GB00/01221	WO 00/58927	PCT/GB00/01471	WO 00/63373	PCT/IB00/00305	WO 00/54956
PCT/GB00/01227	WO 00/59589	PCT/GB00/01493	WO 00/64646	PCT/IB00/00327	WO 00/59813
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PCT/GB00/01254	WO 00/60346	PCT/GB00/01608	WO 00/66457	PCT/IB00/00445	WO 00/61514
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PCT/GB00/01295	WO 00/60669	PCT/GB00/01658	WO 00/67027	PCT/IB00/00463	WO 00/69874
PCT/GB00/01306	WO 00/62311	PCT/GB00/01699	WO 00/70004	PCT/IB00/00479	WO 00/63741
PCT/GB00/01322	WO 00/63523	PCT/GB00/01706	WO 00/70005	PCT/IB00/00486	WO 00/65867
PCT/GB00/01328	WO 00/70145	PCT/GB00/01714	WO 00/68701	PCT/IB00/00488	WO 00/63803
PCT/GB00/01350	WO 00/61190	PCT/GB00/01797	WO 00/69583	PCT/IB00/00496	WO 00/64325
PCT/GB00/01352	WO 00/61666	PCT/GB00/01818	WO 00/69385	PCT/IB00/00506	WO 00/66987
PCT/GB00/01361	WO 00/61113	PCT/GB00/01829	WO 00/70129	PCT/IB00/00554	WO 00/63424
PCT/GB00/01363	WO 00/65343	PCT/GB00/01910	WO 00/69914	PCT/IB00/00558	WO 00/63426
PCT/GB00/01368	WO 00/62028	PCT/GE99/00003	WO 00/54672	PCT/IB00/00575	WO 00/63427
PCT/GB00/01371	WO 00/63399	PCT/GR00/00018	WO 00/64316	PCT/IB00/00618	WO 00/64731
PCT/GB00/01379	WO 00/63673	PCT/HR99/00036	WO 00/49861	PCT/IB00/00777	WO 00/58189
PCT/GB00/01384	WO 00/63321	PCT/HR00/00003	WO 00/50811	PCT/IB00/00848	WO 00/51775
PCT/GB00/01386	WO 00/61734	PCT/HU00/00026	WO 00/58476	PCT/IB00/00856	WO 00/67163
PCT/GB00/01391	WO 00/65191	PCT/HU00/00033	WO 00/63009	PCT/IB00/01141	WO 00/60381
PCT/GB00/01401	WO 00/60927	PCT/HU00/00037	WO 00/65949	PCT/IL99/00189	WO 00/58925
PCT/GB00/01410	WO 00/64834	PCT/IB99/00398	WO 99/48091	PCT/IL99/00631	WO 00/31934
PCT/GB00/01418	WO 00/61108	PCT/IB99/00546	WO 00/58921	PCT/IL99/00651	WO 00/32804
PCT/GB00/01430	WO 00/65243	PCT/IB99/00588	WO 99/45724	PCT/IL00/00087	WO 00/48696

(Continued on the following page)

(Suite sur la page suivante)

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10/089901

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

14

Applicant's or agent's file reference J.	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GR00/00018	International filing date (day/month/year) 21/04/2000	Priority date (day/month/year) 22/04/1999
International Patent Classification (IPC) or national classification and IPC A47G21/18		
Applicant FOTOPOULOS, G., Anastasios		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 8 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☐ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  06/10/2000	Date of completion of this report  17.08.2001
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Crossley, M  Telephone No. +49 89 2399 2319



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GR00/00018

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

### Description, pages:

1-6 as received on 24/04/2001 with letter of 23/04/2001

### Claims, No.:

1,2 as received on 24/04/2001 with letter of 23/04/2001

### Drawings, sheets:

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GR00/00018

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 1.

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 1 are so unclear that no meaningful opinion could be formed (*specify*):  
**see separate sheet**

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos. .

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GR00/00018

**SECTION III**

1. Independent claim 1 does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined.  
Above all, the claim attempts to define the characterising subject-matter in terms of vague and wholly unclear functional statements, viz: merely that the straw corrugated zone consists of a number of groups of re-entrant overlapping folds - with some of the folds being **expanded**, but "not deformed by force" [presumably achieved during a step in the method of manufacture, although how this particular feature can be recognised as such in a product category of claim is unknown] and with some of the folds being **contracted** and interspersed therebetween "in order to achieve (ie. the so-called 'desired result') the best possible straightening of the straw".  
Such a broad and unclear formulation, however, does not enable the Reader to determine the matter for which protection is sought, as it is unknown as to how the desired result is in fact achieved in terms of the physical technical elements present in the product.  
In consequence, the aforementioned independent claim 1 does not satisfy Art.6.
2. In addition, and as far as the present formulation of claim 1 can be understood, it is respectfully pointed out that consideration should be taken of a further Search Report document, viz: US-A-4,036,392 (**D3**) (cf.Fig.3) which clearly discloses a straw 21 having a corrugated zone 23 comprising a number of re-entrant overlapping folds, which are initially in a physical state of being all contracted until said straw is bent for packaging and storage (cf. Fig.4) whereupon some of the folds are consequently expanded in the bend curvature zone, whilst the folds in either zone adjacent to the bend curvature zone remain contracted until the straw is removed for use and straightened until the majority or all of the remaining folds are also expanded by the user as the length of the straw is increased when being straightened for use (cf. Fig.5).

**SECTION VII**

**Claims:**

1. It is reiterated that bracketed features throughout claim 1, such as for example "(flexible zone)" render the claim unclear and are non-limiting in terms of scope of protection (cf.Guidelines C-III,4.11).

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GR00/00018

2. It is reiterated that a further clarity problem exists, in that it is believed that claim 1 concerns a drinking straw product alone and not the straw's combination with a liquid package - which is presently the case, by virtue of the wording on lines 3 & 4, "drinking staws.....which are attached to the packaging of fruit juices...".
3. The newly introduced phrase "permanently bent" in line 5 of claim 1 is unclear and misleading as the term 'permanent' is Dictionary defined as 'existing for an indefinite period, viz: not temporary' - whereas it is understood that the straw is not maintained in the bent position after removal for use.
4. Although independent claim 1 appears to be in the category of an **apparatus**, ie. a drinking straw - it has been drafted not only in terms of a **method** type of claim, but also comprises wording describing the desired result to be achieved and omits the technical features necessary for achieving said desired result.
5. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b)).

\* \* \* \* \*

folds) that are not deformed by force and contracted (folded) re-entrant overlapping folds (annular bellows folds) interspersed among the expanded ones so that not many consecutive expanded folds 2, 5 exist without interference of one 3 or more 4 contracted ones in order to achieve the best possible straightening up of the straw. Further, the first folds 1 are contracted, so that after straightening, the straw may bend to all directions.

10 The relevant prior art consists of the following documents:

1. **DE - A - 3 242 257** (Hertel Reinhard - 17 May 1984).

15 The straw that is mentioned in the above document is a different straw with different function (FIG. 18).

It has a zone of expanded folds on the corner 90° portion among two zones of contracted folds, so that the 2 equal "legs" of it can be extended in length prior to use.

Further, the two zones of contracted folds consist of different folds.

25 2. **GB - A - 1 219 595** (UNION CARBIDE CORP. - 20 January 1971) & **US - A - 3 641 884** (JIVOIN - 15 February 1972).

The above Letter Patents refer to properties of the

common, plastic, straight, flexible drinking straws of general use.

No mention is made to straws that are attached to the packaging of fruit juices, milks, coffees etc. and are permanently bent until their use. Besides, approximately 28 years have lapsed since then but no one has thought of some of the recommended innovations.

The present invention describes the way we can overcome the problems created by continuous bending of the straws and achieve the best possible straightening up and functionality of them.

The advantage of the present invention is that it increases the effective length of the straw and attains complete straightening up and functionality of it without a significant increase in the production cost and without major changes in the current production line.

20

### **BRIEF DESCRIPTION OF THE DRAWING**

**FIG. 1** Shows indicatively a straw in bent position, with one corrugated zone having certain folds contracted.

25

### **DETAILED DESCRIPTION OF THE INVENTION**

To assist straightening up of the straw, when all its folds are expanded after bending (like the case is until today), the

straw must have sufficient folds (more than ten), so that when it bends, the folds are not deformed by force.

Further, the straw should not be under any form of external pressure. Therefore the straw, after bending, is let free to remain bent at the desired angle without external pressure. Following this it can be packed in its final form.

If, in any way, more folds are expanded, than those needed to bent the straw to the desired angle, then the extra expanded folds lose their flexibility as the time passes and do not bend to any direction.

To achieve the best possible straightening up and functionality of the straw, even if stored for an extensive period, there have to be sufficient folds so that after bending of the straw, certain folds remain contracted without, of course, deformation of the expanded folds in a forceful way.

We aim at keeping the first folds 1 contracted (e.g. 2-4 first folds) so that after straightening, the straw may bend to all directions thanks to the contracted folds.

Straightening of the straw is considerably assisted by the existence of interspersed contracted folds among the expanded ones, as well as around the middle of the arch formed by bending of the straw, so that not many consecutive expanded folds exist without interference of one 3 or more 4 contracted ones, particularly at the middle of the arch, where

the biggest amount of pressure is exercised [e.g. an expanded fold 2 is followed by a contracted fold 3].

Certainly the number of contracted folds may vary in the  
5 different applications (e.g. in certain packages of juices where the full straightening up of the straw is of no particular interest, we may leave contracted, the first 5-6 folds and only 2-3 interspersed folds, just to secure the expanded folds will not be deformed by force).

10

In order definite folds remain contracted, apart from their number certain other factors are of importance as well, like the material, point (or points) at which pressure is exerted to bend the straw, the shape and the position of fulcrum (or  
15 fulcrums) etc. (e.g. The pressure is applied on a fixed point and the position of the fulcrum changes as the straw bends).

As there exist extra folds, it is difficult for them to be deformed by force. For full-scale application of the  
20 recommended changes there have to be sufficient folds (many more than ten folds).

In order the straw is not under any form of external pressure after bending, it is let free to remain bent at the  
25 desired angle without external pressure. Following this, it can be packed in its final form.

If something goes wrong in bending and some consecutive folds are expanded 5 or some of the first folds is

expanded this is not a serious problem and the straw straightens again (usually without any particular effort), because:

- 5        1. The folds are not deformed by force.
2. There will always be enough contracted folds to support straightening of the expanded ones.

10        With the presence of the contracted folds after bending of the straw, we can increase its effective length as well, because when it straightens and all folds are expanded, it can bend, if we wish, at the first folds and the remaining section stays straight and larger than respective section of  
15 the usual straws.

         In case the straw has more than one corrugated zones (flexible zones) consisting of re-entrant overlapping folds (annular bellows folds), [e.g. the S-shaped straws – **EP-A-0**  
20 **327 244** (ELOPAK SYSTEMS AG)] the above are applied on all zones.

## CLAIMS

1. The flexible drinking straws with one (or more) corrugated zone (flexible zone) consisting of re-entrant overlapping folds (annular bellows folds), which are attached to the packaging of fruit juices, milks, coffees etc. and are  
5 permanently bent until their use in order to take up less space,

**characterized in that**

the corrugated zone (flexible zone) of the straw consists of expanded (unfolded) re-entrant overlapping folds (annular  
10 bellows folds) that are not deformed by force and contracted (folded) re-entrant overlapping folds (annular bellows folds) interspersed among the expanded ones so that not many consecutive expanded folds 2, 5 exist without interference of one 3 or more 4 contracted ones, in order to achieve the best  
15 possible straightening up of the straw.

2. The flexible drinking straws, which are attached to the packaging of fruit juices, milks, coffees etc. and are permanently bent until their use in order to take up less  
20 space, **according to claim 1**

wherein the first re-entrant overlapping folds (annular bellows folds) 1 of the corrugated zone (flexible zone) of the straw are contracted (folded), so that after straightening, the straw may bend to all directions.



**A B S T R A C T****FLEXIBLE DRINKING STRAW**

The invention relates to flexible straws with one (or more) corrugated zone consisting of re-entrant overlapping folds, which are attached to the packaging of fruit juices, milks, coffees etc. and are permanently bent until their use.

5

The corrugated zone of the new straw consists of expanded re-entrant overlapping folds that are not deformed by force and contracted re-entrant overlapping folds interspersed among the expanded ones so that not many  
10 consecutive expanded folds 2, 5 exist without interference of one 3 or more 4 contracted ones. Further, the first re-entrant overlapping folds 1 are contracted.

The advantage of the present invention is that it  
15 increases the effective length of the straw and attains complete straightening up and functionality of it without a significant increase in the production cost and without major changes in the current production line.

20

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GR 00/ 00018	International filing date (day/month/year) 21/04/2000	(Earliest) Priority Date (day/month/year) 22/04/1999
Applicant  FOTOPOULOS, G., Anastasios		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of Invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1  
☐ None of the figures.

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GR 00/00018

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A47G21/18

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A47G B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 1 219 595 A (HARRY J. HARP ET AL) 20 January 1971 (1971-01-20) page 2, line 15 -page 3, line 109; figures ---	1-5
X	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 02, 30 January 1998 (1998-01-30) & JP 09 276113 A (NISHIGAMI:KK), 28 October 1997 (1997-10-28) abstract ---	1-5
X	PATENT ABSTRACTS OF JAPAN vol. 1996, no. 07, 31 July 1996 (1996-07-31) & JP 08 056802 A (TOYO CAP KK), 5 March 1996 (1996-03-05) abstract ---	1-5
	--- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
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- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

25 July 2000

Date of mailing of the international search report

02/08/2000

Name and mailing address of the ISA

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Authorized officer

Vistisen, L

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GR 00/00018

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 32 42 257 A (HERTEL REINHARD) 17 May 1984 (1984-05-17) page 13, line 5 -page 13, line 20; figures 16-19 ---	1-5
X	US 4 036 392 A (MARTIN MARVIN C) 19 July 1977 (1977-07-19) column 2, line 59 -column 5, line 19; figures ---	1-5
A	GB 2 249 017 A (INT PROD DEV) 29 April 1992 (1992-04-29) ---	
A	EP 0 597 551 A (VER COOP MELKIND) 18 May 1994 (1994-05-18) -----	

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GR 00/00018

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 1219595	A	20-01-1971	BE 734849 A DE 1806530 A US 3409224 A	01-12-1969 14-05-1970 05-11-1968
JP 09276113	A	28-10-1997	NONE	
JP 08056802	A	05-03-1996	NONE	
DE 3242257	A	17-05-1984	NONE	
US 4036392	A	19-07-1977	NONE	
GB 2249017	A	29-04-1992	NONE	
EP 0597551	A	18-05-1994	NL 9201975 A DE 59301592 D	01-06-1994 21-03-1996

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## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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990100138 22 April 1999 (22.04.99) GR

(71)(72) Applicant and Inventor: FOTOPOULOS, G., Anastasios  
[GR/GR]; 51 Zakynthou St., GR-113 62 Athens (GR).

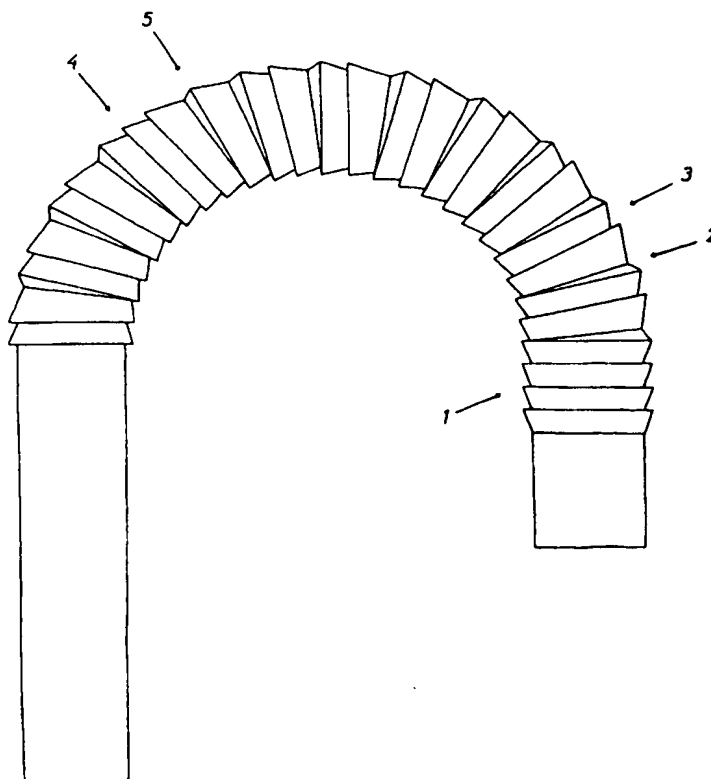
(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

**Published**  
*With international search report.*

(54) Title: FLEXIBLE DRINKING STRAW

(57) Abstract

The invention relates to flexible straws (with one (or more) flexible zone consisting of folding rings) which are attached to the packaging of fruit juices, milks, coffees etc. and are bent to take up less space. The invention, by increasing the number of rings and keeping certain of the rings folded (1, 3, 4) succeeds in straightening the straw up again almost without any damage and in bending the straw to all directions. Further it increases the effective length of the straw. The advantage of the invention is that it attains complete straightening up and functionality of the straw without a significant increase in the production cost and without major changes in the current production line.



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**ENTRY INTO THE US NATIONAL PHASE**

International Application Number: PCT/GR 00/00018

International Filing Date: 21 April 2000

Priority Date Claimed: 22 April 1999

Title: FLEXIBLE DRINKING STRAW

Appn Number:

Appn Filed:

Examiner/GAU:

Date: October 09, 2001

UNITED STATES PATENT AND TRADEMARK OFFICE,

Commissioner for Patents

Washington, District of Columbia 20231

**GENERAL**

- I enclose the first page data of the PCT application.
- The Certified Priority Documents must be transmitted by the International Bureau.

**PAYMENT OF THE NATIONAL FEE**



I enclose a copy of the receipt of wire transfer through CITIBANK, for \$ 500 - nr. 3012630276 – September 20, 2001. I informed about it the Financial Accounting Division (Mr. Thomas Hellmer – Director) by fax and e-mail dated September 21, 2001.

From October 01, 2001 the Basic National Fee has been increased by \$ 15 (from \$ 430 to \$ 445). I enclose this sum (\$ 15) **in cash** to secure that I have paid the proper amount.

### **DOCUMENTS FOR THE US GRANT PROCEDURE**

The basis for the procedure is the documents on which the International Preliminary Examination Report is based as they are amended now.

### **COMMENTS ON THE IPER**

#### **I. SECTION III.1 – Independent Claim 1.**

I amend Independent Claim 1 according to Examiner's instructions.

- The "... are not deformed ..." is replaced by "... have not been deformed ...".
- The "... in order to achieve ..." is replaced by "... in order that we achieve ...".

**II. SECTION III.2 – Document US-A-4,036,392 (Marvin Martin).**

The straw in the above document consists of 2 corrugated zones. Each zone has 11 corrugations. The corrugations are not re-entrant overlapping folds (annular bellows folds). Please, see Document GB-A-1,219,595.

**FIRST PRELIMINARY AMENDMENT**

The basis for the amendments is the documents on which the International Preliminary Examination Report is based.

**Changes in the Claims**

All Claims are cancelled and replaced by new claims 3,4.

**Remarks**

In Independent Claim 1 that has been rewritten as Independent Claim 3:

- The "... are not deformed ..." is replaced by "... have not been deformed ...".
- The "... in order to achieve ..." is replaced by "... in order that we achieve ...".

I submit a copy with the new Claims (1 sheet).

10/089901

**REQUEST FOR CONSTRUCTIVE ASSISTANCE**

As the way of writing an application by the USPTO is quite different than by the EPO I respectfully request the constructive assistance and suggestions of the Examiner pursuant to M.P.E.P. § 2173.02 and § 707.07(j) in order that I can place this application in allowable condition.

Very respectfully,

*A. G. Fotopoulos*  
ANASTASIOS G. FOTOPOULOS

Applicant Pro Se

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